

IN THE CLAIMS

1. (currently amended) A method of generating an immune response in a subject, comprising:

~~mucosal~~ intranasal administration of a composition comprising a detoxified bacterial ADP-ribosylating toxin and a replication-defective dendritic cell-tropic alphavirus vector ~~gene delivery vehicle~~ comprising a polynucleotide encoding at least one antigen.

2-4. (canceled)

5. (currently amended) The method of claim 1, wherein at least one of said antigens is derived from a sexually transmitted pathogen.

6. (withdrawn) The method of claim 5, wherein the sexually transmitted pathogen is a bacteria.

7. (withdrawn) The method of claim 6, wherein the bacteria is selected from the group consisting of gonorrhea, chlamydia and syphilis.

8. (original) The method of claim 5, wherein the sexually transmitted pathogen is a virus.

9. (original) The method of claim 8, wherein the virus is selected from the group consisting of HIV, HBV, HSV, HCV and HPV.

10. (previously presented) The method of claim 8, wherein the virus is HIV-1.

11-12. (canceled)

13. (currently amended) The method of claim [[12]] 1, wherein ~~the gene delivery vehicle is an alphavirus vector and~~ the alphavirus vector is a Sindbis vector.

14. (currently amended) The method of claim [[12]] 1, wherein the ~~gene delivery vehicle is an alphavirus vector and said~~ alphavirus vector is selected from the group consisting of Semliki Forest virus, Venezuelan equine encephalitis virus and Ross River virus vector.

15. (currently amended) The method of claim [[12]] 1, wherein the ~~gene delivery vehicle is an alphavirus vector and said~~ alphavirus vector comprises sequences from two or more alphaviruses.

16-18. (canceled)

19. (previously presented) The method of claim 1, wherein an HLA class I-restricted immune response is elicited in the subject.

20. (previously presented) The method of claim 19, wherein an HLA Class II-restricted immune response is elicited in the subject.

21. (currently amended) The method of claim 1, further comprising introducing into target cells of the subject a nucleic acid molecule which encodes at least a protein selected from the group consisting of a Class I MHC protein, a Class II MHC protein, CD3, ICAM-1, and LFA-3.

22. (withdrawn) The method of claim 1, further comprising the step of administering a second gene delivery vehicle encoding at least one second antigen or an immunomodulatory factor.

23. (withdrawn) The method of claim 22, wherein the second gene delivery vehicle is administered mucosally.

24. (withdrawn) The method of claim 22, wherein the second gene delivery vehicle is administered non-mucosally.

25. (withdrawn) The method of claim 1, further comprising the step of administering one or more polypeptides to the subject.

26. (withdrawn) The method of claim 25, wherein the polypeptides comprise at least one second antigen.

27. (withdrawn) The method of claim 25, wherein the polypeptides comprise an immunomodulatory factor.

28. (withdrawn) The method of claim 25, wherein at least one of the polypeptides is administered mucosally.

29. (currently amended) The method of claim [[13]] 1, wherein said alphavirus vector is contained in an alphavirus replicon particle.

30. (previously presented) The method of claim 15, wherein said alphavirus vector is contained in an alphavirus replicon particle.

31-34. (canceled)

35. (previously presented) The method of claim 1, wherein the detoxified bacterial ADP-ribosylating toxin is selected from the group consisting of: a cholera toxin, a pertussis toxin, and an *E. coli* heat-labile toxin.

36. (previously presented) The method of claim 35, wherein the detoxified bacterial ADP-ribosylating toxin is an *E. coli* heat-labile toxin and the *E. coli* heat-labile toxin is LT-K63.

37. (previously presented) The method of claim 35, wherein the detoxified bacterial ADP-ribosylating toxin is an *E. coli* heat-labile toxin and the *E. coli* heat-labile toxin is LT-R72.
38. (previously presented) The method of claim 35, wherein the detoxified bacterial ADP-ribosylating toxin is a cholera toxin and the cholera toxin is CT-S109.
39. (previously presented) The method of claim 35, wherein the detoxified bacterial ADP-ribosylating toxin is a pertussis toxin and the pertussis toxin is PT-K9/G129.
40. (withdrawn) The method of claim 1, wherein the at least one antigen is derived from an influenza virus.
41. (previously presented) The method of claim 1, wherein the composition further comprises CpG.
42. (previously presented) The method of claim 1, wherein the gene delivery vehicle is administered according to a multiple dose schedule.